Midecamycin
PRODUCT DATA SHEET

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Product Name:	Midecamycin
Product Number:	M007
CAS Number:	35457-80-8
Molecular Formula:	$C_{41}H_{67}NO_{15}$
Molecular Weight:	813.97
Form:	Powder
Appearance:	White or Off-White Powder
Source:	*Streptomyces mycarofaciens*
Potency (on a dry basis):	≥950 µg/mg
Melting Point:	153-158°C
Storage Conditions:	2-8°C
Description:	Midecamycin is a macrolide antibiotic similar in structure to erythromycin. Midecamycin is soluble in methanol, ethanol, and acidic solutions.
Mechanism of Action:	Midecamycin inhibits bacterial growth by targeting the 50S ribosomal subunit preventing peptide bond formation and translocation during protein synthesis. Resistance to midecamycin is commonly attributed to mutations in 50S rRNA preventing midecamycin binding allowing the cell to synthesize proteins free of error.
Spectrum:	Midecamycin is a broad spectrum antibiotic targeting a wide range of bacteria especially those which cause respiratory, ear, and skin infections.
References:	Morikawa, K. "Immunomodulatory Effects of Three Macrolides, Midecamycin Acetate, Josamycin, and Clarithromycin, on Human T-lymphocyte Function in Vitro." *Antimicrobial Agents and Chemotherapy* 38.11 (1994): 2643-647. Ncbi.gov. Web. 18 Sept. 2012. Lovmar, Martin, and Tanel Tenson. "The Mechanism of Action of Macrolides, Lincosamides and Streptogramin B Reveals the Nascent Peptide Exit Path in the Ribosome."*Journal of Molecular Microbiology* 330.5 (2003): 1005-014.